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1. **Indian Chief in Line for Norway's Throne** Kinney
2. **Ottawa Greets Eisenhower in Two Languages** Gray
3. **Tierra del Fuego Battles Animal Invasion** Canova
4. **Jack Frost Is Autumn's Artist and Assassin** Kinney
5. **Camels Lure Crowds to Sahara Oasis** Johnston-Atwater

"How About a Camel Ride, Mister?"—Two of the shaggy animals which have helped boom Bou Saada from caravan whistle stop to thriving winter resort await customers below a hotel terrace. The white-turbaned guide relaxes between tours over the surrounding Algerian desert.

(SEE BULLETIN NO. 5)

MAYNARD OWEN WILLIAMS

ones. Thus they have been able to pay for enough food imports to cover their deficit, as well as for other necessities purchased abroad.

A big asset in coping with this problem is the world's third-largest shipping fleet. Although the nation's 3,300,000 population is about equal to Virginia's, the merchant marine totals more than 3,000 vessels.

A large number of Norwegian ships never see their home ports for long periods of time. Instead they carry commerce of other nations, shuttling from one foreign harbor to another.

Not all seafaring Norwegians are in world trade. Many make their living in smaller ships at ocean fishing grounds. Their catch makes a sizable contribution to the country's economy. Whaling is another good income source.

Ignoramuses Few—An illiterate person is a rarity in Norway. The educational system is of a high order, and children are required to attend public school from seven until fourteen years of age. Opportunities for advanced learning are extensive.

This emphasis on education has paid dividends. A great number of the noted statesmen, writers, composers, professional men, scholars, and scientists have come from plain families. As a result, life is very democratic with few class distinctions.

Norwegians may be serious minded, but they find time to be gay and enjoy themselves. Skiing, skating, and other cold-weather sports are popular recreations. The winter season lasts until May.

Regardless of the time of year, there are forestlands to tempt the hunter. These wooded regions, a valuable natural resource, cover a fifth of the country. For the angler, lakes and rivers are numerous.

In summer the old Viking heritage asserts itself, and the sons of the Norsemen zestfully take to the delights of sailing.

The dragon ships of the Vikings were the first known to have ventured into the waters of the Western Hemisphere. Eric the Red discovered Greenland in 982. About the year 1000 his son, Leif Ericson, found a country he called Vinland because of its grapes. Historians agree he touched the American continent, perhaps south of Maine.

Whether Leif saw any American Indians is not recorded, but a later expedition reported finding the natives hostile, unlike the friendly modern Crow braves and maidens who journeyed to Oslo this autumn to entertain audiences with their tribal dances and make the Crown Prince a chief.

References—Norway is shown on the Society's map of Europe and the Near East. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

See also "Native's Return to Norway," in *The National Geographic Magazine* for November, 1953; "Baltic Cruise of the *Caribbee*," November, 1950; "Norway Cracks Her Mountain Shell," August, 1948; "Spitzbergen Mines Coal Again," July, 1948; "Country Life in Norway," April, 1939; "Norway, A Land of Stern Reality," July, 1930; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 11, 1952, "Oslo Plays Host to Winter Olympics." *(Issues of The Magazine not more than 12 months old are available to schools and libraries at a specially discounted price of 50¢ a copy. Earlier issues sell for 65¢ a copy through 1946; $1.00, 1930–1945; $2.00, 1912–1929. Write for prices of issues prior to 1912.)*

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SUBSCRIPTIONS SEVENTY-FIVE CENTS FOR THIRTY WEEKLY ISSUES DURING THE SCHOOL YEAR.

UMI

ANDREW H. BROWN

Wooded Hills Crowd Norway's Southernmost City—Wedged between hills and river, Mandal has little space to grow. Old frame houses face one another in close and friendly neighborliness across narrow, picturesque streets. Downriver from the forests floats timber for the city's shipyards and furniture factories.

Bulletin No. 1, November 9, 1953

Indian Chief in Line for Norway's Throne

Chief Mountain Bird of the Crow tribe now emerges as heir to the throne of Norway.

Far from upset, Norwegians approved the Indian ceremonial at Oslo, the capital, which recently made their 17-year-old Crown Prince Harald an honorary member of the tribe and foster son of Donald Deernose, visiting Crow chieftain.

Norway's ties with the United States are warm and many. Ninety-six per cent of Norwegian emigrants during the last century chose to live under the Stars and Stripes. Their skills and industry have contributed much to the prosperous growth of their adopted country.

Apt Name Picked—The title Harald received goes well with the rugged nature of his land. About two-thirds of Norway's 125,182 square miles are mountainous. The mountains march down to the sea, cradling in their valleys the winding bays or fjords which mark the long coast line (illustration, back cover).

Nature shortchanged the country on farmland, however. Only a twentieth of the area is suitable for agriculture. This fact has had a profound influence on the national character. The people have learned to make the best possible use of their other resources, especially human

JOHN E. FLETCHER

Fur-Coated Mounties Guard the Peace Tower—Ottawa's "Big Ben" tolls the hours on bells that range from 10 pounds to 11 tons. The tower rises from the Main Parliament Building, Canada's capitol. Matching Gothic structures make an imposing group overlooking the Ottawa River.

foreground is taken up by the lumber mills of Hull, Quebec. Upriver the Chaudière Falls, pesky hurdle on the westward route for Canada's canoe explorers, are all but choked by dams. The Canadian National Railways station congests the center of town. Street conditions are pointed up by the Pothole Watchers Association which reports depth, age, and number of potholes in traffic lanes.

As it is, Ottawa easily satisfies the visitor who comes to see Canada personified in a city. The majestic government buildings symbolize the might and glory of a rich and growing transcontinental power. The Ottawa River and the Rideau Canal bespeak the great role that waterways have played in the development of Canada. And the blending of two races and two languages reflects the national character.

References—Ottawa may be located on the National Geographic Society's map of Canada, Alaska & Greenland.

See also "Sea to Lakes on the St. Lawrence," in *The National Geographic Magazine*, September, 1950; "Quebec's Forests, Farms, and Frontiers," October, 1949; "Newfoundland, Canada's New Province," June, 1949; "Exploring Ottawa," November, 1947; "New Brunswick Down by the Sea," May 1941; "Salty Nova Scotia," May, 1940; and "Gentle Folk Settle Stern Saguenay," May, 1939.

UMI

Bulletin No. 2, November 9, 1953

Ottawa Greets Eisenhower in Two Languages

The "Welcome—Bienvenue" flags will be flying in Ottawa this coming week end (November 13-15). In English and French, the bilingual bunting will greet President Eisenhower as he pays a friendly visit to the national capital of his prosperous neighbor to the north.

Ottawa was selected by Queen Victoria in 1857 to be the seat of Canada's government ten years before the land of the maple leaf achieved Dominion status. Her advisers pointed out that it was a compromise site—halfway between the large population centers of French-speaking Quebec and English-speaking Ontario.

At that time the backwoods town had only two small distinctions. One was its roistering lumber industry. The other was the Rideau Canal, built by a Colonel John By of the Royal Engineers to connect the Ottawa River and Lake Ontario. The canal was planned to be "safe from the Americans," evidently an echo from the strained situation due to the War of 1812.

Anglo-French Air Develops—Predominantly British in population, the settlement adopted the colonel's name and was known as Bytown until 1854 when it was incorporated as the city of Ottawa.

As Canada's national government grew, many French Canadians entered the civil service and moved to the capital. These were followed by many others, lured from crowded parishes in the Province of Quebec by the prospect of employment in a growing city. Together, they have made Ottawa today nearly as bilingual as Montreal and Quebec City.

Visitors from the States notice the international flavor in street signs: "No left turn"—"Virage à gauche interdit." At a gate of the Parliament Buildings a plaque advises: "Exit, entrance by east gateway"—"Sortie, entrée grille de l'est." On near-by Confederation Square English is deemed adequate on signs that say simply, "Please!" Traffic snarls there have caused Ottawans to call the famous plaza Confusion Circle.

For every two citizens of British descent among Ottawa's 202,000 inhabitants there is almost one French Canadian. Of Canada's total 14,000,000 population, there are 6,700,000 of British blood and 4,300,000 of French origin. Prime Minister Louis St. Laurent, who will be Eisenhower's host, is a French Canadian, fluent in both tongues.

Unlike Washington, Ottawa's counterpart in the United States, the Canadian capital is not enclosed in a federal district. It is a self-governing city of the Province of Ontario. The city is paid by the national government for untaxable federal property. Its citizens vote.

Attractive Expansion Planned—Further development of the city is envisioned in the National Capital Plan, a 50-year, 250-million-dollar face-lifting that embraces 900 square miles on both sides of the River.

Canadians and visitors alike see the need for the program. As one stands on Parliament Hill and looks across the Ottawa River the entire

FROM ADMIRAL A. STANTON MERRILL, U.S.N.

America's Southernmost Tip Rears a Rocky Head into a Mist of Clouds—Cape Horn towers 1,391 feet above the waters of Drake Passage. This bleak pathway between Atlantic and Pacific was named for Britain's famous navigator of the first Elizabeth's reign—Sir Francis Drake.

ships battling 'round the Horn in vilest weather—clippers rushing tea from China, wheat ships racing to Britain with Australian grain. The forced-draft dash of the *U. S. S. Oregon* from San Francisco to Cuba in the Spanish American War excited the entire nation, and dramatized the need for the Panama Canal shortcut that later became a reality.

Compared with the storied Horn, the rest of Tierra del Fuego has lived in obscurity. It had a short-lived gold boom once and recently Chile has brought in some oil wells. Otherwise, its known resources are meager. Some fur-bearing animals yield pelts for export but sheep are the big thing. Chilean flocks are of particularly high grade. Efforts to defend their pasturage against the rabbits, who now number millions, have shown little success. Wire-mesh fencing, shotguns, dogs, gas, even germ warfare have thus far failed to turn the tide.

The Claim of Two Cities—Both Ushuaia and Punta Arenas have supporters for the title of the world's southernmost city.

Ushuaia partisans cite the geographical fact their contender is 170 miles southeast of Punta Arenas. They also point out the Chilean city is on the mainland side of the Strait of Magellan.

Backers of Punta Arenas counter that world-famed diplomatic handbooks, noted for accuracy, give the title to the Chilean city. They also mention the population is fifteen times larger.

References—Tierra del Fuego appears on the Society's map of South America. For additional information, see "'Round the Horn by Submarine," in *The National Geographic Magazine* for January, 1948; and "Inside Cape Horn," December, 1937 (out of print; refer to your school or public library).

UMI

Bulletin No. 3, November 9, 1953

Tierra del Fuego Battles Animal Invasion

Invaders are swarming over Tierra del Fuego, last stop on the inhabited line in the Western Hemisphere.

The enemy is the rabbit, coming in thousandfold hordes which continue to multiply rapidly. The legions of long-eared animals have such ravenous appetites that it is feared in time they will strip the pasturelands which are the mainstay of the chief industry, sheep raising.

Under Two Flags—The harassed region is, for the most part, a bleak, rugged, semibarren area of some 28,000 square miles. Most of the eastern part, representing about a third of the total, is an Argentine territory. The rest belongs to Chile.

A close look at a map will show Tierra del Fuego is an archipelago, made up of one quite large island and numerous smaller ones. The whole island group is separated from the South American mainland by the Strait of Magellan, named for the intrepid explorer first to complete the circumnavigation of the world.

With the exception of the two capitals, the land is sparsely settled. The population includes some descendants of the original Indian inhabitants who are now called Fuegians. Their material culture is not high. Argentina brought over 600 Italian colonists after the war in the hope of developing its section, but no startling progress has been reported.

Ushuaia, capital of Argentina's part, claims a population of more than 2,000, or about a quarter of all the people under its administration. Until recent years Argentina maintained a penal colony there.

For the Chilean portion, the governmental seat is Punta Arenas which boasts a population of 30,000. This is a surprise city for a dreary stretch of the world. Attractive and progressive, it performed a minor miracle in becoming increasingly popular with tourists. It has few trees, the rainy season is long, and the surrounding country drear, cold, and devoid of vegetation. Visitors, however, seem to find a stark beauty in the landscape, just as they enjoy rugged or desolate places elsewhere. Commercially, the city prospers as a shipping point for mutton and wool.

"Fireland" Named by Magellan—Groping for a passage to the Pacific, Magellan first sighted this coastal tip of the hemisphere at November's end in 1520.

Huge fires burned all along the shore, so he called it *Tierra del Fuego*, Land of Fire. The reason these innumerable fires were usually blazing was to keep the Indians warm. A robust people, these natives wore nothing but a breechcloth even in a season of fierce gales and cold. This was enough when they had fires by which to warm themselves occasionally.

An odd coincidence marks Cape Horn's name. The Spanish call it *Cabo de Hornos*, Cape of Furnaces, which suggests the furnacelike shore fires. Credit for discovery of the cape usually goes to two Dutch mariners who named it Hoorn in 1616 after the home town of one of them. Whether "Hornos" or "Hoorn," the change to the English "Horn" was easy.

The mist-shrouded cape has become a symbol for high adventure and daring. Its very mention stirs up pictures of dauntless men and sturdy

growers do not always get advance warning, and Jack Frost still manages to steal in for his deadly mission.

He likes to slide down hills, by the way. When cold air comes to a valley, it spills down the sides. That is why many orchards are planted on slopes. Crops on a valley floor run greater risk from frost.

Inspires Poets—Frost has given English literature some of its grandest lines. Shakespeare, in one of his plays, made telling use of the words "killing frost" to describe the overnight fall from favor of a royal adviser.

Another British poet, Shelley, wrote sadly of fallen frost-tinted leaves as "yellow, and black, and pale, and hectic red, pestilence-stricken multitudes."

To people raised on farms in the United States, there is nothing that quite touches the chords of memory like the sentiment expressed by the midwestern poet, James Whitcomb Riley (1849-1916). In simple language he captured the look of the autumn landscape:

"A pictur' that no painter has the colorin' to mock—
When the frost is on the punkin and the fodder's in the shock."

References—See also, "Weather Fights and Works for Man," in *The National Geographic Magazine* for December, 1943.

Squash Plants Bivouac in Tents When Enemy Frost Is on the March—The paper caps protect one of Coachella Valley's distinctive crops. This southern California lowland, irrigated by Colorado River waters, also grows date palms (background) imported from the Middle East.

U.S. BUREAU OF RECLAMATION

UMI

Bulletin No. 4, November 9, 1953

Jack Frost Is Autumn's Artist and Assassin

Jack Frost, one of nature's most delicate artists and an expensive villain as well, is back at work across the United States.

In some places he has only hinted at his return by lightly brushing brown fields with his silver crystals. To others he has already shown both his artistry and the harsh side of his character. Fruit and vegetable growers in the southeast and southwest are on notice that he will have them worrying in due time.

He asks no fee for his magic touch in autumn's color riot of foliage or for the fairylike creations of lacy ice he paints on windowpanes. His annual visit, however, costs the country some 300 million dollars in damages, because he ruins so many tender buds and young plants. The mischief he does to roads also runs into big figures.

Brother of Dew—Frost might be called winterized dew. Both start life as water vapor in the atmosphere. Like dew, frost is usually formed at night when the earth, deprived of the sun's heat, cools. The heat given off during this cooling process causes the moisture vapor in the air to condense. When the temperature is below freezing, instead of becoming a droplet of dew, the vapor condenses on objects as exquisite filigrees of frost.

The fragile designs these ice crystals form are seemingly endless in variety and beauty. Sometimes they suggest stars, feathers, transparent leaves, exotic undersea creatures, jungles, swirls, and strange arrangements that seem to have been pilfered from other planets.

Grownups as well as children often stand before a frosty window and let their imaginations marvel at the many things these masterpieces conjure up. It can be as fascinating as watching the shapes dancing flames take in an open fireplace.

Works Nine Months—In the dual role of Jack the Artist and Jack the Plant Assassin, frost starts work in September, is busy until June.

Any time during that period killing frosts may hit the northern and central Rocky Mountain areas. It takes a temperature four or more degrees below the 32-degree freezing point to produce killing frosts. They will destroy exposed buds, vegetables, and other plants which might survive a light, brief frost. In extreme cold, people may speak of black frost because plant leaves turn that color.

Florida, other states on the Gulf of Mexico, and parts of southern Arizona and California have the shortest period of frost danger. It does not start until after December 1 and ends before March. In other parts of the country Jack Frost's arrival and departure vary.

Improved weather-forecasting methods, with radio, TV, and telephones to spread the frost alarm, have put a crimp in Jack's style. Growers get time to take a number of protective measures to safeguard their fruit buds and vegetables. Small plants can be covered (illustration, below), orchards heated by smudge pots, or the air kept violently disturbed by huge electric fans. The assassin needs calm cold air for his work; the turbulent blasts of the fans thwart him. Since weather is fickle, however,

Mohammed by that time had his camel-riding business well organized. The Geographic man described travelers completing their desert fling by jouncing across the dunes on the humped beasts. In a brief year Mohammed's mounts had established themselves as a tourist "must" in a class with the cog-railway excursion up Italy's Vesuvius or the snow-mobile trip over Canada's Columbia Icefields.

Along with vacationers, Bou Saada has attracted new "industries." Desert dancers, glittering with jewelry of golden coins, whirl in dazzling costumes to the rhythm of flutes and chants. Vendors offer as local souvenirs purses and cigarette cases of camel skin, rugs woven on village looms. White-turbaned guides stand by at the hotels to offer their services (illustration, cover).

Most popular of all diversions is navigating a ship of the desert. According to Mohammed Daud Ali, "Camels have made Bou Saada." For $2 a day, a visitor may rent one. They come placid or mildly skittish. The animal's usual docility is sometimes laid to stupidity. Lessons in mounting and dismounting are thrown in for the daily fee. A boy guide goes along. He not only sees that the visitor doesn't get lost, but makes it his job to keep the camel awake. The creatures are inclined to sink down with practically no warning and take a nap.

Population Booms with Camel's Popularity—Since the camel craze developed, Bou Saada's population has increased from 4,000 to 10,000. For centuries it had been little more than a caravan whistle stop on Arab trade routes between the Mediterranean and the heart of Africa. Before that, it was on a Numidian trail when Algeria was the granary of Rome's golden age.

Today Bou Saada is loveliest in March when the almond trees blossom in a pink and white haze and pear and apple trees are at the peak of their pastel glory. An irrigation system devised by damming the springs and running a series of ditches over the land has made it possible to raise such vegetables as beans, peas, and potatoes, as well as fruit. Local truck gardens are a useful supplement to the food which must be trucked down from the more fertile and intensively cultivated coastal areas along the Mediterranean.

By June the summer heat begins to shimmer over Bou Saada's wilting trees and scorch the land. Tourists stay away and it is the camels' turn to take a vacation. But sand, rather than heat, is the real scourge of the town. Strong winds have blown immense quantities of sand from near-by dunes into the northern edge of the settlement.

Residents fear that the shifting sand may some day choke the springs and wipe out the entire oasis. However, as long as bulldozers are available for clearing away the encroaching banks, Bou Saada's camels will probably continue to attract adventurous travelers.

Some visitors are not impressed by the town's troubles with sand. After the usual camel canter, one of them said, "I expected more dunes. The movies show much better ones."

References—Bou Saada may be located on the Society's map of Africa.

For additional information on Algeria, see "Oasis-hopping in the Sahara," in *The National Geographic Magazine* for February, 1949; "Eastward from Gibraltar," January, 1943; and "Trans-Africa Safari," September, 1938.

UMI

MAYNARD OWEN WILLIAMS

Desert Girls Keep Busy on Souvenirs for Oasis Guests—When the Geographic photographer says "Smile," nimble fingers pause and youthful faces express delight in being photographed. Native sheep furnish wool for scarfs and rugs; from oasis marshes come reeds to be woven into baskets and purses.

Bulletin No. 5, November 9, 1953

Camels Lure Crowds to Sahara Oasis

On the list of happy men in Bou Saada, Algeria's desert "haunt of happiness," Mohammed Daud Ali's name leads all the rest. By taking the camel out of the caravan and putting it under the tourist, this enterprising Arab brought prosperity to his oasis city and comparative riches to himself.

In 1946 Mohammed assembled a stable of camels and offered rides, at a price, to a group of visitors. Everyone enjoyed the novelty, the word spread, and Bou Saada's boom as a winter resort began. Four new hotels sprang up.

Come by Bus and Plane—Now vacationists arrive by bus in one day from Algiers, 125 miles north, or they fly from Paris to near-by Biskra and motor from there. The palm-flecked town rises white and golden in the midst of desert dunes. A National Geographic Society staff writer and photographer who visited the oasis in 1947 reported that when cold winds sweep Algiers "fortunate folk hurdle the mountains and let Bou Saada's sunshine soothe their souls."

(SEE BULLETIN NO. 1) HANS KEUSEN

A Fisherman of Sogne Fjord Drapes His Nets to Dry—Handy for a clothesline is the ladder to a watchtower used for spotting salmon. When a watchman on the platform leaning out over the fjord sees fish entering the net, he signals for a haul-in before they escape. Norway's fisheries employ 100,000 men.